

Clean version of all currently pending claims for U.S. Patent Application Serial No. 09/214,881

4. (Three Times Amended) A kit for diagnosing an autoimmune disease, the kit comprising:
  - a first antigen comprising a human HMG-1 polypeptide, a polypeptide having an amino acid sequence homology of 90% or more with human HMG-1 indicated by SEQ ID NO:1, or a fragment thereof which reacts with an antibody from an autoimmune disease patient;
  - a second antigen comprising a human HMG-2 polypeptide, a polypeptide having an amino acid sequence homology of 80% or more with human HMG-2 indicated by SEQ ID NO:2, or a fragment thereof which reacts with an antibody from an autoimmune disease patient;

a first component for detecting a first antigen-antibody complex; and  
a second component for detecting a second antigen-antibody complex; wherein the autoimmune disease is selected from the group consisting of rheumatoid arthritis, human systemic lupus erythematosus, Sjögren's syndrome, Behçet's disease, primary biliary cirrhosis, microscopic polyangiitis/polyarteritis nodosa, ulcerative colitis, Crohn's disease and autoimmune hepatitis.
6. (Amended) The kit of claim 4, wherein:

the polypeptide from an HMG-1 family is selected from human, bovine, porcine, chicken, mouse, or rat HMG-1; and  
the polypeptide from an HMG-2 family is selected from human, bovine, porcine, chicken, mouse, or rat HMG-2.
7. (Withdrawn) A method for diagnosing an autoimmune disease in a patient, the method comprising the step of detecting one or more antibodies in the patient by contacting a reagent with antibodies from the patient, the reagent comprising at least one polypeptide selected from the group consisting of a polypeptide from an HMG-1 family, a polypeptide from an HMG-2 family, and a fragment of a polypeptide from the HMG-1 family or the HMG-2 family, wherein  
the at least one polypeptide reacts with an antibody of an autoimmune disease patient, and

the autoimmune disease is selected from the group consisting of human systemic lupus erythematosus, Sjögren's syndrome, Behçet's disease, scleroderma, primary biliary cirrhosis, microscopic polyangiitis/polyarteritis nodosa, ulcerative colitis, Crohn's disease and autoimmune hepatitis.

9. (Withdrawn) The method of claim 7, wherein:  
the polypeptide from an HMG-1 family is human, bovine, porcine, chicken, mouse, or rat HMG-1; and  
the polypeptide from an HMG-2 family is human, bovine, porcine, chicken, mouse, or rat HMG-2.
10. (Withdrawn) A method of diagnosing an autoimmune disease in a patient, the method comprising:  
detecting the presence or absence in the patient of antibodies to HMG-1, HMG-2, or both HMG-1 and HMG-2; and  
diagnosing the autoimmune disease based on the antibodies detected, wherein the autoimmune disease is selected from the group consisting of human systemic lupus erythematosus, Sjögren's syndrome, Behçet's disease, scleroderma, primary biliary cirrhosis, microscopic polyangiitis/polyarteritis nodosa, ulcerative colitis, Crohn's disease, and autoimmune hepatitis.
11. (Withdrawn) A method of diagnosing the cause or prognosis of an ulcerative colitis patient, the method comprising contacting antibodies isolated from the patient with a polypeptide selected from an HMG-2 family, or an effective fragment thereof, wherein the polypeptide or fragment reacts with an antibody to HMG-2.
12. (Withdrawn) The method of claim 11, further comprising contacting antibodies from the patient with a polypeptide selected from an HMG-1 family, or an effective fragment thereof, wherein the polypeptide or fragment reacts with an antibody to HMG-1.
13. (Withdrawn) The method of claim 11, further comprising determining whether the patient is ANCA- negative or ANCA-positive.
14. (Amended) A diagnostic drug for detecting an antibody of autoimmune diseases, wherein: the drug comprises:

a human HMG-1 polypeptide, a polypeptide having an amino acid sequence homology of 90% or more with human HMG-1 indicated by SEQ ID NO:1, or a fragment thereof which reacts with an antibody from an autoimmune disease patient; or a human HMG-2 polypeptide, a polypeptide having an amino acid sequence homology of 80% or more with human HMG-2 indicated by SEQ ID NO:2, or a fragment thereof which reacts with an antibody from an autoimmune disease patient; the drug reacts with an antibody of an autoimmune disease patient; and wherein the autoimmune disease is selected from the group consisting of rheumatoid arthritis, human systemic lupus erythematosus, Sjögren's syndrome, Behçet's disease, primary biliary cirrhosis, microscopic polyangiitis/polyarteritis nodosa, ulcerative colitis, Crohn's disease and autoimmune hepatitis.

16. The diagnostic drug of claim 14, wherein the polypeptide is human HMG-1, human HMG-2, bovine HMG-1, bovine HMG-2, porcine HMG-1, porcine HMG-2, chicken HMG-1, chicken HMG-2, mouse HMG-1, mouse HMG-2, rat HMG-1, or rat HMG-2.